Daily Lesson Plan

Previous Known Knowledge/Pre-Assessment

I will be assessing previous known knowledge by formulating a student focused discussion at the beginning and end of class. Before I assign any assignment related to this material. I will also be assessing their knowledge through a pop-quiz that is not graded in regards to genetics at the beginning of week.

Topic: Genetics **Course:** Biology Grade Level: 11th Date: January 30, 2014

Standards Addressed

HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

Teacher/Student Guide

I will be lecturing the students with the aid of a PowerPoint. The students will be taking notes in preparation for the unit exam over the alleles, traits and genetics. I will also be expecting students to understand how to create their own punnet squares and they will be identifying that they are able to identify varying karyotypes. I will use a worksheet for punnet square problems which will allow me to assess where they are at.

Overview

By the end of this lesson, the students will be able to distinguish between traits, alleles and genes. Students should also be able to accurately term what genetics is and how variation occurs. Students will learn how to perform punnet square calculations for monohybrid and dihybrid crosses. Students need to determine different banding patterns by reading karyotypes. Students should also be able to read the banding patterns on the P and Q arms.

Outcomes-Methods

Students will be able to compare and contrast between the traits and alleles. They will also be able to perform punnet square problems for both monohybrid crosses and di-hybrid crosses. The students will become very efficient in these subjects that they will be able to excel on the pop quiz and their worksheet problems. If the students come back with a high fail rate I will look at my method and consider student feedback and more in class practice. Students will then be able to not only remember but learn new important facts about genetics and biology. When evaluating the worksheet I will grade each question with a ½ point weight. Question 15 will have a weight of 3 points making this a ten point assignment.

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Instruction (Notes, Review, Participation)

I will be giving a pop quiz to start the class period the tomorrow. I will be assessing what the students’ knowledge of genetics and the punnet squares/karyotyping. After this pop quiz I will be discussing the topic and what is due for that next few days. I will tell my students that they will be comparing and contrasting the traits, varying allele combinations and basic understanding of chromosomes. I will be giving the students a few introductory questions about genetics and how variation not only comes about but the importance of evolution through natural selection. The students are required to go home and complete this required work on the punnet squares and later in the week be prepared to test over this and karyotyping. This will be done with the use of a worksheet that overlooks all of the monohybrid and di-hybrid crosses.

Accommodations (Homework, parents, athletics)

Students with an IEP that have troubles reading will be required to look for photos as well as the videos to assist with their practice problems. The students who have problems reading will not be required to answer all of the questions, but will be required to complete the punnet square questions to the best of their abilities. Students with an IEP will also be able to complete the assignment during our question and answer period at the beginning of class the next day.

# Daily Lesson Plan Cont.

Reflection

I will be providing a reflection on the knowledge gained during and after the lesson was completed. I will be talking about what went right, what problems I encountered and what I will adjust if I had the opportunity to reteach the lesson again.

Duration

I will record the amount of time needed to complete this lesson in this area.

Teaching input modeling and understanding.

I will provide the information that the students need to gain knowledge of the skill lecture, video and pictures. I will be providing examples of what is expected for the end product of work. I will then be checking for understanding at the end to make sure students “got it” before moving on. If the skill is not understood I will plan to reteach the concept/skill.

Anticipatory Set

I am going to gain the students attention through a question and answer discussion with the class about previous known knowledge. I will also show a short video clip about genetics in hopes to grab the attention of the students. The goal is to focus student attention on the lesson and to create an organizing framework of ideas and to gain a better understanding of the students known knowledge.